



902-A

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HIGH-VACUUM CATHODE-RAY TUBE*Supersedes Type 902***General:**

Heater, for Unipotential Cathode:

Voltage. $6.3 \pm 10\%$ ac or dc volts
Current. 0.6 amp.

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to All Other Electrodes. 7.5 μmf DJ₁ to All Other Electrodes. 8.5 μmf DJ₄ to All Other Electrodes. 6.0 μmf

Phosphor (For Curves, see front of this Section) No.1

Fluorescence Green

Persistence. Medium

Focusing Method. Electrostatic

Deflection Method. Electrostatic

Overall Length $7\text{--}7\frac{7}{16}" \pm \frac{3}{16}"$ Greatest Diameter of Bulb. $2" \pm \frac{1}{16}"$ Minimum Useful Screen Diameter $1\text{--}\frac{3}{4}"$

Mounting Position. Any

Base Medium Shell Octal 8-Pin

Basing Designation for BOTTOM VIEW 8CD

Pin 1-Grid No.2,

Anode No.2,

Deflecting

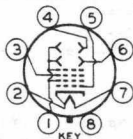
Electrode DJ₂,

Deflecting

Electrode DJ₃,

Pin 2-Heater,

Cathode



Pin 3-Anode No.1

Pin 4-Deflecting

Electr.DJ₁

Pin 5-Grid No.1

Pin 6-Deflecting

Electr.DJ₄

Pin 7-Heater

Pin 8-No Connection

tion

*DJ₁ and DJ₂ are nearer the screen**DJ₃ and DJ₄ are nearer the base*

With DJ₁ positive with respect to DJ₂, the spot is deflected toward pin 3. With DJ₃ positive with respect to DJ₄, the spot is deflected toward pin 1.

The angle between the trace produced by DJ₃ and DJ₄ and its intersection with the plane through the tube axis and pin 1 does not exceed 10°.

The angle between the trace produced by DJ₃ and DJ₄ and the trace produced by DJ₁ and DJ₂ is $90^\circ \pm 40^\circ$.

Maximum Ratings, Absolute Values:ANODE-No.2 & GRID No.2 VOLTAGE. 660 *max.* voltsANODE-No.1 VOLTAGE. 330 *max.* volts

GRID-No.1 (CONTROL ELECTRODE) VOLTAGE:

Negative Value. 125 *max.* voltsPositive Value. 0 *max.* volts

PEAK VOLTAGE BETWEEN ANODE No.2 AND

DEFLECTING ELECTRODE DJ₁ OR DJ₄ 385 *max.* volts



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(continued from preceding page)

Typical Operation:

Anode No.2 & Grid No.2 Voltage*	400	600	volts
Anode No.1 Voltage for Focus at 75% of Grid-No.1 Volt- age for Cutoff *	100	150	volts
Grid-No.1 Volt. for Visual Cutoff#	-40	-60	volts
Max. Anode-No.1 Current Range▲	Between -50 and +10		μamp.
Deflection Sensitivity:			
DJ1 and DJ2	0.273	0.183	mm/v dc
DJ3 and DJ4	0.326	0.217	mm/v dc
Deflection Factor:**			
DJ1 and DJ2	93	139	v dc/in.
DJ3 and DJ4	78	117	v dc/in.

* Brilliance and definition decrease with decreasing anode-No.2 voltage. In general, anode-No.2 voltage should not be less than 400 volts.

● Individual tubes may require between +20% and -35% of the values shown with grid-No.1 voltages between zero and cutoff.

Visual extinction of stationary focused spot. Supply should be adjustable to ± 50% of these values.

▲ See curve for average values.

** Individual tubes may vary from these values by ± 20%.

Spot Position:

The undeflected focused spot will fall within a 10-mm square centered at the geometric center of the tube face and having one side parallel to the trace produced by DJ1 and DJ2. Suitable test conditions are: anode-No.2 voltage, 600 volts; anode-No.1 voltage, adjusted for focus; deflecting-electrode resistors, 1 megohm each for DJ1 and DJ4, connected to anode No.2; the tube shielded from all extraneous fields. To avoid damage to the tube, grid-No.1 voltage should be near cutoff before application of anode voltages.

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1.5 max. megohms
Impedance of Any Deflecting-Electrode Circuit at Heater-Supply Frequency	1.0 max. megohm
Resistance in Any Deflecting- Electrode Circuit▲▲	5.0 max. megohms

▲▲ It is recommended that both deflecting-electrode-circuit resistances be approximately equal.